AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A polymer actuator comprising a conductive powder compact comprising a conductive polymer and dopant, an ion donor, a work electrode, and a counter electrode, whereby it contracts or extends when voltage is applied between said work electrode and said counter electrode, wherein said powder compact is in a planar or columnar shape.

2. (Original) The polymer actuator according to claim 1, wherein said conductive polymer has a conjugated structure.

3. (Previously Presented) The polymer actuator according to claim 1, wherein said conductive polymer is at least one selected from the group consisting of polypyrrole, polythiophene, polyaniline, polyacetylene and their derivatives.

4. (Previously Presented) The polymer according to claim 1, wherein said ion donor contains an electrolyte.

5. (Previously Presented) The polymer actuator according to claim 1, wherein said ion donor is in the form of a solution, a sol, a gel or a combination thereof.

6. (Previously Presented) The polymer actuator according to claim 1, wherein said ion donor contains an amphiphatic compound.

7. (Previously Presented) The polymer actuator according to claim 1, wherein said ion donor has a binder function.

8. (Previously Presented) The polymer actuator according to claim 1, wherein said dopant has a binder function.

9. (Previously Presented) The polymer actuator according to claim 1, wherein said work electrode is in contact with said powder compact, and wherein said counter electrode is disposed in said ion donor at a position separate from said powder compact.

10. (Canceled)

11. (Previously Presented) The polymer actuator according to claim 1, wherein said conductive powder has electric resistance of 10^{-4} Ω to 1 MΩ.

12. (Previously Presented) The polymer actuator according to claim 1, wherein the amount of said conductive polymer in said conductive powder is 1-99.9% by mass.

13. (Previously Presented) The polymer actuator according to claim 1, wherein said conductive polymer has an average particle size of 10 nm to 1 mm.

14. (New) The polymer actuator according to claim 1, further comprising a movable plate fixed to a side of said conductive powder compact, said movable plate being capable of displacing linearly in response to an extension or a contraction of said conductive powder compact caused by an absorption or a desorption of said ion donor in said conductive powder compact, when voltage is applied between said work electrode and said counter electrode.

15. (New) The polymer actuator according to claim 1, further comprising a movable bar and a movable plate, wherein said movable bar is perpendicularly fixed to said movable plate on a side of said conductive powder compact, said movable bar being capable of moving in a horizontal direction, when said conductive powder compact is driven by a supplied electric current.

16. (New) The polymer actuator according to claim 1, further comprising a movable bar, a movable plate and a cell, wherein said movable bar is perpendicularly fixed to an upper portion of said movable plate in a net shape fixed to a side of said conductive powder compact such that the upper portion of said movable plate projects from the ion donor and said cell has an opening for horizontally supporting said movable bar at a position higher than said conductive powder compact and a surface of said ion donor, said movable bar being capable of moving in a horizontal direction, when said conductive powder compact is driven by a supplied electric current.

17. (New) The polymer actuator according to claim 1, further comprising:

additional work electrodes and conductive powder compacts, a plurality of planar insulators, a movable bar, a movable plate and a cell;

wherein a plurality of sets of said work electrodes, powder compacts and planar insulators are laminated in the order work electrode, powder compact, and planar insulator;

wherein another work electrode and another conductive powder compact are laminated in said cell, where each conductive powder compact has a fixed end bonded to each work electrode, and a driving end bonded to each insulator, and each insulator is bonded to each work electrode;

wherein said movable bar is perpendicularly fixed to said movable plate and said movable bar is fixed to the driving end of said conductive powder compact on a side of the counter electrode, where a width of said insulator is smaller than a width of said cell; and

said movable bar penetrates through an opening of said cell and is movably supported by a bearing disposed in the opening thereof, said movable bar being capable of moving in a horizontal direction when said conductive powder compact is driven by a supplied electric current.